WATERSHED WRAP

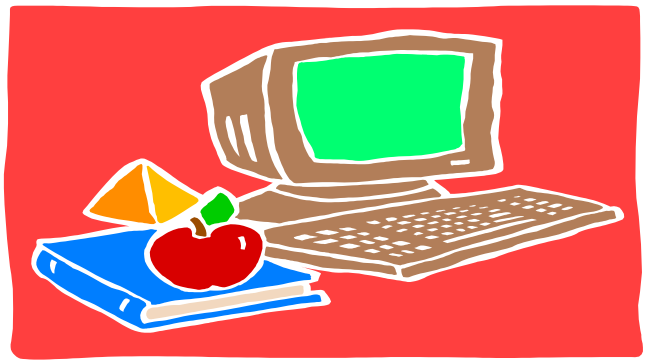
Quarterly Newsletter from the Coeur d'Alene Tribe's Fish & Wildlife Program describing watershed management efforts. Offering readers food for conversation and paper for wrapping!

Spring Equinox 2004 (Vol. 8 No. 1)

The Coeur d'Alene Tribal Fish and Wildlife Programs work in a variety of cooperative, governmental and educational arenas in efforts to protect, enhance and restore our fish and wildlife resources. This publication is intended to provide all people interested in Fish and Wildlife of the Coeur d'Alene Reservation information about our program, and to solicit your support as well as constructive criticism. Thank you for your interest.

Respectfully,

Mark H. Stanger, Fish, and Wildlife Outreach Specialist



Changes to the Coeur d' Alene Tribe Internal and External Website

By Jason Brown, Wildlife Program

Recently a committee was established to review the content of and come up with new ideas for the Tribe's internal and external websites. The committee was developed in order to increase traffic and improve the overall effectiveness of the websites for the public and tribal employees. David Newberger, Web Development Coordinator for the Tribe is heading up the committee with help from several members of other departments within the Tribe including Jennifer DeGraffenreid from Public Affairs, Charlotte Nilson, Planning, Jennifer Hale, Language, John Hartman and Jason Brown both from Natural Resources.

Currently the Tribe's external website receives very little traffic in part due to the fact that last year the Tribe switched its address from cdatribe.com and .org over exclusively to cdatribe-nsn.gov in order to reflect its status as a sovereign nation operating under its own government and established laws. To improve quality and traffic the committee intends to completely revamp the website with a new design and add new content throughout the year including a calendar of events, a frequently asked question section for several departments, tribal language interpretation pages, more detailed information on Fisheries Program activities, several new forms including the Hunter Report Card and an online Hunting and Fishing Licensing System, as well as an electronic version of the *Watershed Wrap* newsletter. The committee's main focus initially will be to improve our overall Google rank, and to maintain an exceptional website that will be a source of prestige for the Tribe as well as provide an opportunity to receive awards. Google, which is a common search engine used by many of us, ranks each website by determining factors such as number of links to the site and the quantity of traffic the site receives. Currently, due to the multiple link references and limited traffic, the site suffers in rank. One thing that MIS, particularly David, has been working on is finding all those links to the Tribal site that refer to it as cdatribe.com or .org and converting those over to the cdatribe-nsn.gov. If you see any of these references please let David know so that he can get them switched over as soon as possible. Getting all these switched over will have a great impact on the traffic the site receives and in turn the Google rank.

Plans for the internal website will also include a change in design and a multitude of new pages. The committee intends to create an internal website that will perform and act as a useful tool to all Tribal employees that will include reference manuals, documents, and forms that each employee will be able to access in order to assist them in their day to day job activities.

Currently the committee is focusing on design and layout changes and is meeting once a week to review design proposals. We are welcome to any ideas that you may have and if you would like to email ideas or contact any of us we would be glad to bring those ideas to the committee and incorporate them into the new websites. If you have any further questions please

email David Newberger @ dnewberger@cdatribe-nsn.gov or give him a call at (208) 686-1164.

New Staff Member - Coeur d'Alene Tribal Environmental Programs
By Steve Thomas, Environmental Specialist

The Coeur d'Alene Tribe's Environmental Programs Office is pleased to announce Steve Thomas as the Tribe's new Environmental Specialist. Steve began work on February 17th and is relocating from Fort Collins, Colorado, where he recently completed a Master of Science degree in Watershed Science. His undergraduate degrees are in Botany and Mechanical Engineering. Steve also has experience working with the City of Boulder and in the Chicago area in ecological restoration and resource management.

Other staff members in the program are: Tiffany Allgood, Environmental Action Plan Coordinator; Bill Denton, Environmental Health Specialist; and two temporary office assistants, Jo Ann Johnson and Sheri-Lyn Favel, until a permanent Office Manager is hired.

Contact Information
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Bill Denton – (208) 686-6412
Steve Thomas – (208) 686-1088
Jo Ann Johnson and Sheri-Lyn Favel – (208) 686-5136

Lake Creek Property Management
By Gerald I. Green, Wildlife Program

The Coeur d'Alene Tribe purchased a 147.6-acre parcel at the mouth of Lake Creek in the fall of 2001. The property was purchased as part of Bonneville Power Administration's program to mitigate for wildlife habitat losses due to the construction of the Albeni Falls Dam and the subsequent flooding of lands upstream of the Dam. The property is referred to among Tribal Wildlife staff as the Windy Bay Property because it encompasses Lake Creek where it flows into Coeur d'Alene Lake at the west end of Windy Bay. Currently the Wildlife Program is initiating active management of the property and during the coming spring and summer the two major objectives to be achieved on the parcel are property protection and evaluation.

Property protection will insure that the wildlife values for which the property was purchased are maintained. Protection will also allow those wildlife habitats to be enhanced according to a specific strategy. Property protection will first entail identifying the location of the legal boundaries around the property through the completion of a certified boundary survey. Once the boundaries are precisely marked, a plan for access management will be developed and if gates or fences are identified as necessary, they will be installed. This protection does not exclude the possibility of visiting the property but it may preclude the possibility of visiting by a means that may degrade wildlife habitats. For instance it is possible that the meadows within the property boundary, being in such close proximity to Windy Bay, may be used as nesting grounds by waterfowl. If this turns out to be the case, access will need to be limited during the waterfowl-nesting season.

The evaluation of the property will also include identifying what species currently inhabit the property, what species could potentially use the property, and how the hydrology of the property functions to support wildlife habitats. The Tribal Wildlife Program will identify management actions that should be taken to improve wildlife and fish habitats on the property through the development of a Management Plan.

Most actions to protect and evaluate the property will be done simultaneously, however some protection actions will not be identified until a full assessment is completed. This protection and evaluation phase of management will include seeking public comment on management of the wildlife habitats on the Windy Bay Property. For those who would like to comment on the Windy Bay Property, or would like to know the direction of future management, you can contact the Tribe's Wildlife Office at (208) 686-6603, or my office directly at (208) 686-0312.

Location of the Windy Bay property.

Natural Resources Fish, Water, & Wildlife, Lake Management, and Early Childhood Grand Openings!

By Mark H. Stanger, Outreach Specialist

The Coeur d'Alene Tribal Fish, Water & Wildlife, Lake Management, and Early Childhood Learning Center (ECLC) just celebrated the grand openings of new buildings on March 16th from 9:00 a.m. to 12:00 noon at the Coeur d'Alene Tribal Wellness Center.

There was a traditional blessing of both buildings with sweetgrass & western red cedar. The Red Sky and Rose Creek drummers sang an honor song, which is a prayer in our native way to bless and honor the community and the new buildings. The ceremony continued with Kootenai High School teacher John Love and Principal Mr. Lund making a special presentation of a gift. The forestry class made a bookshelf that looks like the bow of a boat. On the top shelf is a metal carving that represents a fish jumping from the surface of the water. The bottom part is a wooden plaque that is inscribed in the Coeur d'Alene Language to read: **ch'ats'qh'nt'wesh khwe te'l hnpu'snet (**Translation: *We will look at each other, from the heart).*

Chairman Ernest Stensgar gave opening remarks followed with addresses from Robert Matt, Lake Management Director. He recognized the Bonneville Power Administration and Tribal council for helping with costs of the new NR building. Special thanks were given to the Tribal Facilities crew who contributed a majority of the labor to construct the building. Norma Peone, Interim Education Director, recognized the vision of former Director Dianne Allen and Ann McAlister, ECLC Coordinator, for their fundraising efforts to bring the building into reality. Prior to tours of both buildings, Alfred Nomee, Natural Resources Director recognized tribal members, Robert Matt and Paulette Jordan, for their individual contributions to the NR building's vision and positive aesthetics, respectively. The day ended with an Indian Taco/buffalo burger/smoked salmon luncheon, shared with all the visitors that attended.

Elk Management Project is Initiated

By Nathan Albrecht, Fish and Wildlife Biologist

Populations of moose, elk, white-tailed deer, and mule deer are considered a high priority on the Reservation. These species are important for the subsistence of many Tribal members and are also some of the most visible wildlife species present on the Reservation. They rely heavily on the lower elevation forests to take advantage of the cover, forage, and milder climatic conditions during the winter. Unfortunately, critical winter range habitat has declined over the years due to development and deforestation.

It is believed that this alteration of habitats has had significant impacts on the elk population in the vicinity of the Coeur d'Alene Reservation. Such impacts may include a change in their migration patterns, habitat use, and population numbers. Currently, the Coeur d'Alene Tribal Wildlife Program has very little scientific information on the migration patterns, habitat use, and population attributes of the elk on the Reservation. Most Tribal elk hunting regulations and comments on proposed land-use projects are based on anecdotal information from observations of elk and records obtained from the Idaho Department of Fish and Game (IDFG) and the Washington Department of Fish and Wildlife (WDFW) as well as limited Tribal data.

This lack of Reservation-specific data on the trends and status of local elk herds make it difficult for the Tribe to make informed recommendations to local, state, federal, and Tribal entities regarding land use changes or projects that may affect elk habitat on the current Reservation or in the aboriginal territory. In order to protect the integrity of the elk populations in the area as well as Tribal and environmental values across the landscape, more information is needed about the status and the patterns of that population.

The overall goal of this project is to establish a solid information base on the movements and population attributes of elk on the Reservation. Information that the Wildlife Program intends to obtain from this project includes:

- Locations of migration corridors
- Seasonal movements of individual herds
- Locations of calving areas

- Information on habitat usage, high priority habitats, and winter range
- Cow:Calf ratios
- Post-winter recruitment rates
- Trends in overall population abundance
- Improved Tribal elk harvest data

The first step in gathering this information is to locate some of the elk on the Reservation and document their movements. This is done by putting radio-collars on elk, allowing Tribal Wildlife personnel to monitor their movements. Each radio-collar gives off a signal at a specific frequency, which can be heard with the help of a telemetry receiver. This signal tells us approximately where the elk is located. The process of fitting these collars on the elk began in February of this year. Approximately 10 female elk were captured in a corral-trap, loaned to the Tribe by the IDFG. With the help of a generous grant from Rocky Mountain Elk Foundation, the Wildlife Program plans on trapping more elk next winter. Once these elk are collared, we can begin to build a database of known locations of elk on the Reservation. Over time, these documented locations have the potential to tell us a great deal about what areas of the Reservation are particularly important to the local elk population. In addition, observations of collared-elk combined with improved hunting records could give us a better idea of the status of the elk population, as well as help identify trends in population attributes. The information gained from this project will also be used by IDFG and WDFW to fill some of their data gaps in regards to the elk movements, habitat use patterns, and population attributes in the vicinity of the Coeur d'Alene Reservation.

It is possible that you may see elk with collars for the next several years. These collars are brown, with a small black box on the bottom. Elk hunters will still be permitted to harvest these elk, although if they are in a herd with un-collared elk, the Wildlife Program would obviously prefer that an un-collared elk be harvested. If you do harvest an elk with a collar, or happen to find a collar, please notify the Wildlife Program. If you have any questions about this project, please contact me at 205-686-7042.

George Aripa, Cameron Heusser, and Nathan Albrecht releasing a radio collared elk.

Cutthroat Habitat Use and Movement in Coeur d'Alene Lake and the Lower St. Joe, St. Maries and Coeur d'Alene Rivers: Initial Findings

By Angelo Vitale, Coeur d'Alene Tribal Fisheries Biologist

The Coeur d'Alene Tribe has been working with Avista Corporation, IDFG, USFWS and other resource managers over the last year to develop information on habitat use by adult cutthroat trout in Coeur d'Alene Lake and its tributaries as part of the relicensing process for Post Falls HED (original story published in *Watershed Wrap vol. 7, no. 2*). The Post Falls Dam directly influences water level elevations in Coeur d'Alene Lake and its tributaries by maintaining stable lake levels during the summer, which results in the inundation of shallow lake margins and the lower reaches of streams entering the lake. Inundating these areas throughout the summer rather than allowing these areas to variously dewater each year as would occur under natural conditions may adversely influence cutthroat trout habitat use and migration/movement behavior. In addition, summer weather conditions warm the surface layer of the lake, including the inundated areas of the tributaries that might otherwise be free-flowing, potentially forming or expanding a thermal barrier to adfluvial trout migrations and/or otherwise affecting fish utilization of these areas.

How dam operations specifically affect native fishes, particularly cutthroat and bull trout, and the habitats they rely on has been of particular interest to the Tribe and other resource managers. The ongoing studies have focused on tracking tagged fish in the lake as well as the lower St. Joe, St. Maries and Coeur d'Alene rivers to help answer these questions. This article is intended to provide a brief update on the initial results of this work.

A total of 58 cutthroat trout were radio-tagged in the lake and lake tributaries in May and early June

of 2003; 19 in the Coeur d'Alene River, 17 in the St. Maries River, and 13 in the St. Joe River. Within these three rivers, all of the fish were released upstream of the inundated reaches. Three additional cutthroat trout were captured, radio-tagged and released directly in Coeur d'Alene Lake (in Wolf Lodge Bay), and six others were tagged and released just downstream of a migrant fish trap in Lake Creek. The radio tags had rated operating durations of either 340 or 500 days. In addition, fifteen cutthroat trout were collected from Coeur d'Alene Lake or from the free-flowing portion of Lake Creek, several miles upstream of the lake, and tagged with depth-sensitive sonic tags to assess the vertical and horizontal movements of cutthroat trout in Coeur d'Alene Lake. These tags had a rated operation life of about 60 days.

The subsequent locations of tagged fish were determined through aerial and ground surveys in the Coeur d'Alene River, while the St. Joe and St. Maries Rivers, and the areas of Coeur d'Alene Lake were surveyed primarily through aerial tracking and by boat.

Radio Tag Evaluation

In the Coeur d'Alene River, the tagged cutthroat trout appeared to have been primarily resident or fluvial (relying on riverine habitats) in nature, with only two showing evidence of being lacustrine-adfluvial (relying on both lake and river habitats). Overall, nine tagged fish moved downstream and seven moved upstream within a month or two of release, while three fish exhibited little or no movement throughout the monitoring period. Four of the downstream moving fish eventually moved back upstream, and six of the upstream moving fish subsequently moved back downstream during the monitoring period, although not always to the release location. One of the lacustrine-adfluvial fish moved downstream to the lake in early June and returned to the river in November. The downstream migration through about 30 miles of the inundated reach took about one day, while the upstream migration through this same area took about 41 days.

The tracking observations in the St. Joe River showed many of the cutthroat trout moved substantial distances within the river, both downstream and upstream from the release locations. Three of the five fish initially moving upstream, traveled between 1 and 3 miles upstream, while the other two migrated about 16 and 35 miles upstream, sometime between their release date and July 10. However, no fish were documented to have moved downstream to the lake, and only one dropped as far down as the St. Joe and St. Maries River confluence (River Mile 15.5). Once again, the data suggests the tagged fish were predominantly of a resident or fluvial life history form rather than an adfluvial one. However, three fish moved 10 to 13 miles downstream to the inundated reach sometime between the July and October surveys. This suggests that some of the fish may reside in the lower mainstem, but the exact timing of these migrations and habitat use and their relationship to project operations is still unknown.

A somewhat more consistent, downstream pattern of movement was observed for the tagged cutthroat trout released in the St. Maries River, compared to either the Coeur d'Alene or St. Joe Rivers. Of the eleven fish that moved more than about one mile downstream following release, three were later detected at fixed monitoring stations located at the St. Maries/St. Joe River confluence, and later at the Swinging Bridge (at Heyburn). Two of these fish were detected one additional time, near Conklin Park (about two miles down the lake from the Swinging Bridge), during a boat-based monitoring survey in Coeur d'Alene Lake on October 3. One other fish that migrated out of the St. Maries River, moved up the St. Joe River about 12 miles. The general downstream movement pattern of many of the tagged fish in the St. Maries River - fish either moved downstream or did not move - might be the result of the limited number of pools in the river, or water temperature. Water temperatures were greater in the St. Maries River, compared to either the Coeur d'Alene or St. Joe Rivers.

Sonic Tag Evaluation

Only eight of the 15 sonic-tagged fish were detected in the lake after release. While most of the tracking occurred in the southern part of the lake, where the majority of the fish were released, all three of the fish released in the northern end were detected during the tracking surveys following their release. One of the detected fish was subsequently caught by a recreational angler and did not survive, and two of the other detected fish are suspected of either dying or expelling their tags.

There was a distinct pattern of most fish detections occurring at or below a depth of about 20 ft throughout the monitoring period. The most distinct period was between June 25 and July 10, where all of the detections were deeper than 20 ft, and about 83% of the detections were between 20 and 30 ft. The tagged fish also tended to be shallower in the early summer period, compared to late summer. This seasonal change appears to be related to water temperatures observed during water quality surveys in the lake by the Coeur d'Alene Tribe in 2003, as the thermocline occurred at a depth of 20 ft or less in June and 30 to 40 ft by July.

The fish that were detected indicate that cutthroat trout tend to migrate relatively long distances within the lake, and these migrations can occur over a short time period. However, most detections occurred within about 0.5 miles of shore.

During a 24-hour monitoring event, one of the sonic-tagged fish remained near a depth of 25 ft, despite the total water depth varying between 25 and 60 ft. This fish also exhibited substantial movements out into the lake during the 24-hours, and tended to be in deeper portions of the lake at night, and closer to the shore and the bottom during the day. However, the actual fish depth remained relatively constant throughout the 24 hours.

Collectively, this information helps expand our knowledge of fish behavior in both the lake and larger rivers of the area and once this information is better integrated with data on water chemistry and habitat it will help managers better understand the influence that Post Falls Dam has on native fish in the Coeur d'Alene Basin. With this current information in hand it appears that utilization of the inundated reaches of rivers by cutthroat trout is limited both in terms of timing, duration, and frequency compared with upstream reaches in both the Coeur d'Alene and St. Joe river systems. It also helps to illustrate the complexities of migratory behavior and timing that is associated with the lake and river dwelling fish populations in the area. The selective pressures that drive the evolution of behavioral strategies in fish populations has resulted in numerous distinct strategies of movement by adult and juvenile fish between habitats used for spawning, survival and feeding. In a natural system as large and diverse as the Coeur d'Alene Basin the development of many such strategies would have been one key to sustaining the very large cutthroat population that was once found in the Basin. How the operation of Post Falls HED over the last nearly 100 years has homogenized habitat and water quality conditions and affected the survival and sustainability of many stocks of fish may never be fully comprehended, but this study is a good step toward a better understanding of current conditions.